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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,654	06/24/2003	Masaya Tamaru	0649-0895P	1294

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FALLS CHURCH, VA 22040-0747

EXAMINER
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MADDEN, GREGORY VINCENT

ART UNIT	PAPER NUMBER
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2622

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/25/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/25/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

**Office Action Summary**

Application No.

10/601,654

Applicant(s)

TAMARU ET AL.

Examiner

Gregory V. Madden

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 9-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5 and 6 is/are rejected.
- 7) ☒ Claim(s) 3,4,7 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed February 14, 2007 have been fully considered but they are not persuasive.

Regarding claims 1 and 5, the Applicant argues that the Ikeda et al. reference (U.S. Pat. 6,204,881) does not teach the limitations of the claims, in that the combination of image data is performed after gain control processing has been completed. Applicant contends that Ikeda does not teach "multiplying a combined data for the high output image data and the low output image data by a total gain that depends on a scene" (See Remarks, Pg. 8). However, the Examiner respectfully disagrees. Ikeda teaches that both image data I and image data II are corrected via gain control processing and combined in image addition processing, as is taught in Col. 26, Line 27 – Col. 27, Line 34, and Col. 28, Lines 6-10. The Examiner believes that the fact that both image data I and image data II are multiplied by a total gain (in gain control processing) and are then combined sufficiently discloses that a combined data for the high output image data (image data I) and the low output image data (image data II) are multiplied by a total gain that depends on a scene. As such, a combined data (combined image data I and image data II) has been multiplied by a total gain, and thus the Examiner believes that the Ikeda reference does teach the limitations of claims 1 and 5. Please refer to the rejection to these claims set forth below.

As for 2 and 6, the Applicant contends that for the reasons set forth in regard to claims 1 and 5, respectively, the claims are also distinguishable from the Ikeda reference. However, as the rejections to claims 1 and 5 have been maintained, the rejections to dependent claims 2 and 6 are similarly maintained. Claims 3, 4, 7, and 8 remain objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Please refer to the rejection/objection to claims 2-4 and 6-8 set forth below.

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Finally, the Examiner notes that the Applicant has amended the specification to overcome the objections set forth in the previous office action. Therefore, the previous objections to the specification are hereby withdrawn.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 2, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Ikeda et al. (U.S. Pat. 6,204,881).**

First, considering **claim 1**, the Ikeda reference teaches an image combination method of image-combining a high output image data (from image sensing device 401a) and a low output image data (from image sensing device 401b), the method comprising the steps of multiplying a combined data (combined in image combining unit 405) of the high output image data (image data I) and the low output image data (image data II) by a total gain that depends on a scene (via gain control processing). Please refer to Figs. 32-33, Col. 26, Line 27 – Col. 27, Line 34, and Col. 28, Lines 6-10.

As for **claim 2**, the limitations of claim 1 are taught above, and the method of Ikeda further teaches that the total gain is multiplied on the combined data of the high and low output image data (image data I and II) in a range that the high output image data exceeds a certain value (i.e. exceeds the lower limit “100”), as is taught in Col. 27, Lines 35-52.

Next, regarding **claim 5**, as is similarly taught above with regard to claim 1, the Ikeda reference teaches an image pickup apparatus (image sensing devices 401a and 401b) for image-combining (in

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image combining unit 405) a high output image data (image data I) and a low output image data (image data II), the method comprising a multiplying means (gain control) for multiplying a combined data of the high output image data (image data I) and the low output image data by a total gain that depends on a scene. Please refer again to Figs. 32-33, Col. 26, Line 27 – Col. 27, Line 34, and Col. 28, Lines 6-10.

In regard to **claim 6**, the limitations of claim 5 are taught above, and Ikeda further teaches that the total gain is multiplied on the combined data of the high and low output image data (image data I and II) in a range that the high output image data exceeds a certain value (i.e. exceeds the lower limit “100”), as is taught in Col. 27, Lines 35-52.

*Allowable Subject Matter*

**Claims 3, 4, 7, and 8** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

First, in regard to **claim 3**, the prior art fails to teach or fairly suggest an image combination method wherein the range that the high output image data exceeds a certain range is the range that the total gain (p) exceeds a value represented by [(arbitrary numeral “alpha” – coefficient “k”) X (high output image data after gamma correction “high”/threshold “th”)], or [(alpha – k) X (high/th)].

As for **claim 4**, the limitations of claim 3 are taught above, and therefore claim 4 would be allowable based on dependence from claim 4. Further, the prior art fails to teach or fairly suggest that the total gain  $p=0.8$  for high contrast scenes,  $p=0.86$  for cloudy or shady scenes, and  $p=0.9$  for indoor scenes under fluorescent lamp illumination.

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Considering **claim 7**, the prior art again fails to teach or fairly suggest an image combination method wherein the range that the high output image data exceeds a certain range is the range that the total gain (p) exceeds a value represented by  $[(\text{arbitrary numeral "alpha"} - \text{coefficient "k"}) \times (\text{high output image data after gamma correction "high"}/\text{threshold "th"})]$ , or  $[(\text{alpha} - \text{k}) \times (\text{high}/\text{th})]$ .

Finally, in regard to **claim 8**, the limitations of claim 7 are taught above, and therefore claim 8 would be allowable based on dependence from claim 7. Further, the prior art again fails to teach or fairly suggest that the total gain  $p=0.8$  for high contrast scenes,  $p=0.86$  for cloudy or shady scenes, and  $p=0.9$  for indoor scenes under fluorescent lamp illumination.

### *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory V. Madden whose telephone number is 571-272-8128. The examiner can normally be reached on Mon.-Fri. 8AM-5PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc Yen Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Gregory Madden  
April 13, 2007

A handwritten signature in black ink, appearing to read 'Ngoc-Yen Vu', with a long horizontal flourish extending to the right.

NGOC-YEN VU  
SUPERVISORY PATENT EXAMINER